

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A data transmission system including subscriber units configured to interconnect with a central office unit via optical fibers, the central office unit is configured to multiplex a video signal with signals other than the video signal and to deliver them to the subscriber units, wherein each subscriber unit is configured to demultiplex a received signal, said subscriber unit comprising:

a wavelength division multiplexer/demultiplexer configured to eliminate a particular wavelength signal such that the wavelength division multiplexer/demultiplexer outputs wavelength signals other than the eliminated particular wavelength and prevents further downstream transmission of the eliminated particular wavelength,

wherein said wavelength multiplexer/demultiplexer includes a first optical waveguide, a second optical waveguide, and a filter positioned such that the first optical waveguide and the second optical waveguide form a junction at the filter.

Claim 2 (Previously Presented): The data transmission system according to claim 1, wherein said wavelength division multiplexer/demultiplexer is configured to reflect the particular wavelength signal to reject its input.

Claim 3 (Previously Presented): The data transmission system according to claim 1, wherein said wavelength division multiplexer/demultiplexer comprises a reflecting layer configured to reflect the particular wavelength signal at an input end surface of an optical fiber of the subscriber unit.

Claim 4 (Previously Presented): The data transmission system according to claim 3, wherein said reflecting layer comprises a dielectric multilayer filter.

Claim 5 (Original): The data transmission system according to claim 1, comprising an optical fiber with a core and a cladding that covers an external surface of the core, and that has multiple notches formed on the cladding to reflect the particular wavelength signal.

Claim 6 (Original). The data transmission system according to claim 1, wherein said wavelength division multiplexer/demultiplexer comprises an optical wave guide that is made of a polymer and absorbs a signal with a wavelength of 1650 nm, which is employed as the particular wavelength signal.

Claim 7 (Currently Amended): A data transmission system including subscriber units configured to interconnect with a central office unit via optical fibers, the central office unit configured to multiplex a video signal with signals other than the video signal and to deliver them to the multiple subscriber units, wherein each subscriber unit is configured to demultiplex a received signal, and said central office unit comprises:

an optical amplifier configured to amplify the video signal to be transmitted; and

an optical distributor-configured to distribute the video signal output from said optical amplifier and to supply the video signal output to a wavelength division multiplexer/demultiplexer, wherein

each of said subscriber units comprises a wavelength division multiplexer/demultiplexer configured to eliminate a particular wavelength signal such that the wavelength division multiplexer/demultiplexer outputs wavelength signals other than the

eliminated particular wavelength and prevents further downstream transmission of the eliminated particular wavelength,

wherein said wavelength multiplexer/demultiplexer includes a first optical waveguide, a second optical waveguide, and a filter positioned such that the first optical waveguide and the second optical waveguide form a junction at the filter.

Claim 8 (Currently Amended): A data transmission system including subscriber units configured to interconnect with a central office unit via optical fibers, the central office unit configured to multiplex a video signal with signals other than the video signal and to deliver them to the multiple subscriber units, wherein each subscriber unit is configured to demultiplex a received signal, and said central office unit comprising:

a plurality of video signal generators configured to generate video signals with different wavelengths;

a first wavelength division multiplexer/demultiplexer configured to multiplex the video signals supplied from said plurality of video signal generators;

an optical amplifier configured to amplify the video signals output from said first wavelength division multiplexer/demultiplexer; and

an optical distributor configured to distribute the video signals output from said optical amplifier to a second wavelength division multiplexer/demultiplexer, wherein

each of said subscriber units comprises a wavelength division multiplexer/demultiplexer configured to eliminate a particular wavelength signal such that the wavelength division multiplexer/demultiplexer outputs wavelength signals other than the eliminated particular wavelength and prevents further downstream transmission of the eliminated particular wavelength,

wherein said wavelength multiplexer/demultiplexer includes a first optical waveguide, a second optical waveguide, and a filter positioned such that the first optical waveguide and the second optical waveguide form a junction at the filter.

Claim 9 (Currently Amended): A data transmission system including subscriber units configured to interconnect with a central office unit via optical fibers, the central office unit configured to multiplex a video signal with signals other than the video signal and to deliver them to the multiple subscriber units, wherein each subscriber unit is configured to demultiplex a received signal, and said subscriber unit comprises:

a first wavelength division multiplexer/demultiplexer configured to demultiplex the video signals and signals other than the video signal; and

a second wavelength division multiplexer/demultiplexer configured to eliminate a particular wavelength signal such that the wavelength division multiplexer/demultiplexer outputs wavelength signals other than the eliminated particular wavelength and prevents further downstream transmission of the eliminated particular wavelength,

wherein at least said first wavelength multiplexer/demultiplexer includes a first optical waveguide, a second optical waveguide, and a filter positioned such that the first optical waveguide and the second optical waveguide form a junction at the filter.